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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/299,388	04/27/1999	RICHARD FOTLAND	99.01	3198

27667 7590 09/22/2004

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EXAMINER
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CHOI, FRANK I

ART UNIT	PAPER NUMBER
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1616

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/299,388	<b>Applicant(s)</b> FOTLAND ET AL.	
	<b>Examiner</b> Frank I Choi	<b>Art Unit</b> 1616	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 June 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-9,14-23,25-30,32-37,48,49,51-57,59,60,62-67 and 69-71 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,4-9,14-23,25-30,32-37,49,51-57,59,60,62-67 and 69-71 is/are allowed.
- 6) ☒ Claim(s) 3 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/28/2004 has been entered.

#### ***Specification***

Amendment (8/16/2001) did not contain direction to change the title in the Specification by citation to page and line number. Pg. 1 of the Specification lines 1,2 still contains the original title. Appropriate correction is required.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 3, 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 3 at line 10 recites "said unitary dielectric substrate" which renders the claims indefinite as there is no antecedent basis for the term "unitary".

Claim 48 recites the limitation "at respective fixed distances relative to the surface of said dielectric substrate" which renders the claims indefinite. The propositions can only be true if the length and width of region two is not greater than the surface of the dielectric substrate and the surface of the dielectric substrate does not form a side wall defining region two and volume of

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region two is not greater than the conduit delivering the aerosol into region two, however, the claims do not set forth any such limitation. Assuming zero velocity toward the dielectric substrate, if the dielectric substrate is smaller in length and/or width to region two a given particle will travel parallel to the surface of the substrate and as moves across region two it will get closer the surface of the dielectric substrate until it reaches the beginning of the surface, at which point a given particle will be essentially at a fixed distance relative to the surface of the dielectric substrate. Another way to look at this is to picture a point at the beginning of surface of the dielectric substrate, draw a radius perpendicular to the surface of said substrate, draw a circle having said radius with the center point of said circle at the point in the beginning of said substrate. If one draws a parallel tangential line, it is clear that a point on the line which intersects the radius will be closer than a point on the line which is to the left, i.e. off the surface of the dielectric substrate, of the radius to the surface of said substrate. Further, in Figures 4-7, the dielectric substrate includes the side walls which define region two. As such, when the aerosol moves in to region two the particles contained therein will be moving toward one of the side walls and away from the other side wall. As such, the velocity will not be zero and the distance will not be fixed relative to the surface of the dielectric substrate. Furthermore, as a matter of physics, any gas, and, thus, the aerosol, will expand according to the volume of a given space (See The Columbia Encyclopedia, Fifth Ed. (1994), "gas" (<http://www.slider.com/enc/21000/gas.htm>); Remington's (17<sup>th</sup> Ed. 1985), pg. 281). As such, in Figures 5-7, when the aerosol leaves conduit (23), it will expand to fill the volume defined by (33) and (37) or (49). As such, with or without the force provided by the alternating current there will be velocity towards the surface of the dielectric substrate.

Applicant did not appear to address this issue relative to claim 48, as such, the rejection is maintained.

***Double Patenting***

Claim 3 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Claim 1 recites that the charged particles are driven from the moving gas stream by the alternating electric field. Claim 3 recites that the charged particles are removed by the alternating electric field. It appears that the both claims are covering the same thing in that in both cases the charged particles are removed from the gas stream by the alternating electric field.

***Conclusion***

A facsimile center has been established in Technology Center 1600. The hours of operation are Monday through Friday, 8:45 AM to 4:45 PM. The telecopier number for accessing the facsimile machine is (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frank Choi whose telephone number is (571)272-0610. Examiner maintains a flexible schedule. However, Examiner may generally be reached Monday-Friday, 8:00 am – 5:30 pm (EST), except the first Friday of the each biweek which is Examiner's normally scheduled day off.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Mr. Gary Kunz, can be reached at 571-272-0887. Additionally, Technology Center 1600's Receptionist and Customer Service can be reached at (571) 272-1600.

FIC

September 18, 2004



JOHN PAK  
PRIMARY EXAMINER  
GROUP 1600